

**FACILITY AUDIT REPORT**  
**AGRICULTURAL ADMINISTRATION BUILDING**

**#003**

**MAY 31, 1998**

**AGRICULTURAL ADMINISTRATION BUILDING**

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# **AGRICULTURAL ADMINISTRATION BUILDING**

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## EXECUTIVE SUMMARY FOR AGRICULTURAL ADMINISTRATION BUILDING

The first part of the Agricultural Administration Building was completed in 1956. A second floor was added to the north and south wings of the building in 1957. At the same time an auditorium was built between the north and south wings and attached to the east side of the building. The building is occupied by the administrative office of the College of Food, Agricultural and Environmental Sciences. The facility also houses the offices for the Ohio Cooperative Extension Services. There are three major and several minor projects suggested for this building. One major project will replace the hot water heating system, the second major project will replace all the single glazed windows with double glazed windows and the third project will replace the current cooling system with a centralized system. The other projects will replace a lighting dimmer board for the auditorium, provide standby pumps for the three water chillers, repair broken window frames and replace the control air compressor.

### PROPOSED MAINTENANCE PROJECTS AGRICULTURAL ADMINISTRATION BUILD #003

#### A. Corrective Maintenance Projects: Control No

1. *Clean and repair window frames.* \$ 5,000 1843\*

**Sub Total** **\$ 5,000**

#### B. Building Improvement/Addition Projects:

1. *Purchase and install three standby pumps.* \$ 60,000 1816\*

2. *Replace current AC units with one central system.* \$1,755,000

3. *Install emergency lighting throughout the building.* \$ 19,500

**Sub Total** ..... **\$1,834,500**

#### C. Building Component Replacements expected within the next 5-10 years:

1. *Replace auditorium lighting dimmer board.* \$ 125,000 1228\*\*

2. *Replace hot water heating system.* \$ 485,300 1813\*

3. *Replace all single glazed windows.* \$ 500,000 1828\*\*

4. *Replace control air compressor.* \$ 6,500 2414\*

**Sub Total**.....**\$1,116,800**

**Total Cost for all Projects**.....**\$2,956,300**

\* *These projects are currently on our departmental project list.*

\*\**These projects have been increased in costs.*

**AGRICULTURAL ADMINISTRATION BUILDING #003  
RENOVATION PROJECTS IN PROGRESS OR RECENTLY COMPLETED**

<b>Projects:</b>	<b>Budget</b>	<b>Control No</b>
<i>New switch gear.</i>	\$ 88,751	5061-000403
<i>Steam station for Ag. Adm. and Vivian Hall.</i>	\$ 43,292	5061-002402
<i>New A/C compressor.</i>	\$ 6,073	5061-002121
<i>New cooling towers.</i>	\$ 13,415	5061-002104
<i>Masonry repairs.</i>	\$ 12,010	5061-001181
<i>Replace 4 compressor coils.</i>	\$ 80,000	5061-002568
<i>Masonry improvements.</i>	\$ 95,460	315-93-171
<i>Renovate OSU Extension offices.</i>	\$141,061	5061-PF960201
<i>Upgrade the elevator.</i>	\$120,000	315-93-175

**GENERAL BUILDING INFORMATION**  
**AGRICULTURAL ADMINISTRATION BUILDING #003**

BUILDING ADDRESS: *2120 FYFFE ROAD*

GROSS SQ. FT.: *101,313*

NET ASSIGNABLE SQ. FT.: *74,898*

MECHANICAL/CUSTODIAL AREA SQ. FT.: *8,614*

YEAR OF CONSTRUCTION: *1956, 1957*

YEAR OF LAST RENOVATION: *1956*

NUMBER OF STORIES/BASEMENT: *Four stories with a partial basement*

AIR CONDITIONING (Percentage): *80%*

CURRENT USE: *Administrative offices for the College of Food, Agricultural and Environmental Sciences and OSU Extension Offices*

TYPE OF CONSTRUCTION: *Reinforced concrete frame with a masonry skin*

ESTIMATED REPLACEMENT COST: *\$ 14,976,000 \**

COST PER GROSS SQUARE FEET: *\$147.82*

WHEELCHAIR ACCESSIBILITY: *From the east auditorium entrance to the elevator that gives access to all floors.*

OVERALL BUILDING CONDITION: *Satisfactory \*\**

NUMBER OF EXIT STAIRWAYS: *Four (4)*

NUMBER OF OTHER EXITS: *Seven (7)*

AREA SHOP RESPONSIBILITY: *Kinnear Road*

\* *Replacement Cost assigned September 1997 by The Office of University Resource Planning & Institutional Analysis.*

\*\* *The Office of University Resource Planning & Institutional Analysis C-1 Report Condition Code.*

**BUILDING SYSTEMS INFORMATION**  
**AGRICULTURAL ADMINISTRATION BUILDING #003**

**HEATING:**

Source – *Power plant*

Type Heating System – *Hot water*

Main Steam Feed (Line size, valve location) – *4", room 9001M*

Building Htg. Water (line size, valve location) – *steam converter, room 9001M*

**VENTILATION SYSTEM:** *Multizone Systems, Exhaust fans*

**COOLING:**

BLDG. % 80, Chiller: *six reciprocating units for a total of 190 tons.*

Window Units: 80, Thru-the-wall: *none*, Direct expansion units: *none*

**HVAC CONTROL SYSTEM:** *Electric and pneumatic controls, DDC*

**ELECTRIC:**

Source	Size (KVA)	Primary/Secondary Switchgear & Main Disc. (Rm.)
201/306	750	13,200/ 208/120 ROOM 9002M

**PLUMBING SERVICES:**

Water (size, valve location) – *4", room 9001M*

Gas (size, valve location) – *4", room 9001M*

Domestic Hot Water (size, valve location) – *steam converter in room 9001M*

Compressed Air (size, location) – *1/2" in room 50M*

**SEWERS:** Storm – *6@5", 1@10"*, Sanitary - *5@6"*, Combined Storm/San- *none*

**METERS:**

Gas (size, location) – *4", room 9001M*

Water (size, location) – *4", room 9001M*

Electric (location) – *none*

**ALARM SYSTEMS:**

Fire Alarm, Main Panel Room *1M*, Remote Panel Location Room *50M*

Fire Pump @    GPM,  Riser , Pump Location, Room

Sprinkler, Valve Location Room *150* ,  100%,  Partial,  Limited

Horns/Strobes,  Bells in  Halls,  Rooms

Other Alarms – *smoke alarms in ducts*

**ELEVATORS:**

Number-*One*, Type (passenger, freight)- *Passenger*

Manufacturer – *OTIS*, Size- *2,500#, 56"x69"*

**EMERGENCY GENERATOR:**

Size- *none*

**ASBESTOS SURVEY (1986):** *Asbestos containing materials were identified in the pipe insulation throughout the building.*

# **AGRICULTURAL ADMINISTRATION NARATIVE**

## **HISTORY**

The present day Agricultural Administration Building was constructed in two phases. The first phase of the building consisted of the four floors of the west wing and the ground floors and the first floors of the north and south wings. This section was completed in 1956. The second part of the building added a second floor to the north and south wings as well as the 4-H auditorium. This section was completed in 1957. The building serves as the administrative offices for the College of Food, Agricultural and Environmental Sciences. There are three classrooms in the building as well as an Agricultural Library. The one story auditorium attached to the building on the east side has kitchen facilities and is used for large meetings. It is known as the 4-H Center auditorium.

The building is functioning as designed and has held up well over the 43 years since built. A new roof was installed in 1992 and over the past five years new cooling towers were installed, four compressor coils were replaced, new switch gear was installed and masonry improvements were made. The three major projects that are recommended for the building include the replacement of the hot water heating system, the replacement of the decentralized cooling system and the replacement of the original single glazed windows

A review of the work orders indicated that there are a normal number of maintenance calls to the building.

In an interview with the building coordinator, it was learned that the occupants are satisfied with the overall condition and performance of the building systems. There were sporadic complaints about the A/C capability to adequately cool the building, about the cold temperature in room 100N during the winter months and some pipe leaks.

Occupancy of the building, reported by The Office of University Resource Planning & Institutional Analysis in the C-1 Building Space Assignment Report dated September 1997 for a Net Assignable Area of 83,512 SF, is as follows; Administrative and Staff offices 47%, Library 10%, Classrooms 6%, Auditorium 7%, Mechanical 6%, Custodial/Toilet 4% and Circulation 20%.

## **PRIMARY SYSTEMS**

The structural components consist of reinforced concrete perimeter and interior spread footers and poured in place concrete basement walls. There are concrete columns and concrete beams that support concrete floors. These form the basic skeletal components of this four-story building with partial basement.

There are no major signs of settlement or movement in the building foundation or structural columns and supports.

A brick veneer was installed on concrete block to form most of the exterior walls. Limestone is used on the east wall of the auditorium and at the two west entrances

and up to the first floor on the west side. There are granite panels on both sides of the west entrances. The west entrances also have aluminum panels that extend up to the roof level. Because of recent masonry work, the walls are in good condition.

The windows are all single glazed, double-hung aluminum windows. Some windows have a hopper type hinged window below the lower sash. The windows are forty three years old and are difficult to operate and some are in need of repair. There is an unfunded project to replace them with double glazed, energy efficient windows.

The six main entry doors are aluminum with glass and are in good condition. There is one wood overhead door and two single wood doors at the loading dock. One of the single wood doors needs to be replaced. There are three single and four double steel doors leading to the auditorium and the mechanical room below the auditorium. These doors are in good condition.

The original built-up roof was replaced in 1992 with a four ply, coal tar, built-up roof. Overall, the roof is in good condition. Some blisters were noted at several drains and a break was noted at the cooling towers electrical conduit. These defects were corrected by work order # 5064-291425-73. The flashing and parapet caps are in good condition. The small roof over the east entrance has moss that needs to be removed.

## **INTERIOR SYSTEMS**

The interior partitions are mainly glazed block with plaster above the blocks and metal studs and drywall in some office areas. There is a store front glass wall at room 100, which leads to the Vice President's offices. There are glazed tiles in the restrooms. The walls are in good condition throughout the building.

The building has mainly wood doors in metal frames with opaque glazing. Steel fire doors in steel frames are used at mechanical rooms and stairwells. Most of the doors are in good condition and the hardware is still functional. The metal stairwell doors need to be repainted. The push bar on the south west stairwell door, on the first floor level needs to be repaired. The electric panel at the library entrance needs to be replaced.

The wall finishes are mainly glazed tile and paint. There is a carpet wall covering at the auditorium entrance. The restrooms have ceramic tiles on the walls. The wall finishes are in good condition except for cracked tiles on the east wall of room 339T and in the southwest stairwell.

The floors in this building are predominantly vinyl asbestos tiles in the corridors and in the auditorium. There is a brick floor from the entrance at the auditorium to the stairs leading to the first floor. There is carpeting in most offices. The mechanical rooms have concrete floors with a clear sealant. The floors are in good condition.

The ceilings in the building consists of 12" X 12", concealed spline, acoustical tiles in the corridors and offices. Some renovated offices have 2' X 4' suspended tiles. There were a few tiles missing at the elevator on the ground floor that should be replaced. Other then these missing tiles and some stained tiles, the ceilings are in good condition.

## **SERVICE SYSTEMS**

The major service systems, domestic hot and cold water, compressed air, sanitary and storm drainage all appeared to be in good condition and functioning at this time. The plumbing drainage system did not appear to have any problems. The domestic hot water system and the plumbing fixtures appear to be in good condition. The domestic hot water is supplied by a local steam converter and a gas-fired hot water heater.

The one passenger elevator is 43 years old and is being upgraded in the summer of 1998. The elevator does not meet present ADA standards and this project will remedy that situation.

A 4" steam line provides steam from the power plant to a steam converter located in room 9001M. The heating hot water supplies the hot water for the heating coils of the multizone systems, perimeter hot water heating, unit heaters in the mechanical rooms, stairwells and at the entrances. There were complaints noted about the heating system and there is an unfunded project to replace the hot water heating system. This project should eliminate concerns about heating various areas.

Cooling is provided by the multizone systems, by DX units and by window units. Chilled water is supplied by reciprocating chillers located in various mechanical rooms and by cooling towers located on the roof. There are 80 window units located primarily on the second and third floors. There are two single zone DX units that serve rooms 109A and 109B. Two cooling towers located on the high roof were recently replaced and one chiller was replaced in 1992. The rest of the cooling system is 43 years old and should be replaced by a more efficient central system.

Exhaust fans remove air from restrooms and common areas. The kitchen area off the auditorium is separately vented.

## **ELECTRIC**

Circuits number 201/306 feed the 750 KVA, 208/120 volt transformer located off room 9001M which supplies the electrical service to the Agricultural Administration Building. Switchgear, located in room 50A, feeds the lighting and power distribution panels throughout the building. Panel sizes vary throughout the building depending on the load. At about 7.4 watts per square foot the building has a barely adequate power supply. Any added equipment would require an upgrade in the electrical power. The central air conditioning system recommended will reduced the power demand as it will replace a number of inefficient units.

The building has 32-watt fluorescent tube throughout most of the building, with incandescent light fixtures in the auditorium area. There are an adequate number of convenience outlets in the building.

## **SAFETY STANDARDS**

The Agricultural Administration Building is equipped with a manual fire alarm system consisting of pull stations that provide local fire annunciation from the panel in room 50M.

There are lighted exit signs at each exit. There is no emergency exit lighting throughout the building or in the stairwells. A project has been proposed to install the emergency and exit lighting.

Automatic door openers are installed at the auditorium entrance of the building on the eastside, off the parking lot. This entrance gives access to the ground floor and the elevator which gives access to all floors.

## **ASBESTOS**

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment Program's report titled "Inventory of Friable Asbestos Containing Material in Buildings of the Ohio State University (Main and Branch Campuses) and Recommendations for Corrective Action", prepared by PEI Associates and dated Sept. 1986, identifies asbestos containing materials throughout the building in the pipe insulation material.

## **PERIMETER**

The driveway on the eastside of the building has some cracks that need to be filled. The sidewalk on the southwest side of the building is uneven and has cracks that need to be repaired. There are several panels of concrete in the east sidewalk that need to be replaced as well as a piece of curb at the north east entrance. A concrete slab at the east entrance needs to be raised to prevent water accumulation against the outside wall. The metal plate at the base of the light post on the south side of the building is loose and needs to be fastened. The west lawn had a trench cut through it and needs to be repaired. There are pipes and other debris in the mechanical room air intake well that should be removed and the storm drain needs to be cleaned. There are two window screens on the ground floor on the west side that need to be repaired. The concrete dock on the eastside of the building needs to be patched. The security lights at the small east entrance needs a lens cover.

Entrances to the building are well lighted and area, flood and street lighting appear to be distributed properly.

**Maintenance Projects (Less Than \$5000) INTERIOR**  
**AGRICULTURAL ADMINISTRATION BUILDING #003 MAY31, 1998**

- 1 Repair the panel cover on the electric panel at the library entrance.  
Workorder # 01-5064-324644-69
  - 2 Repair the cracked wall tiles in room 339T and in the southwest stairwell at the third floor level.  
Workorder # 01-5064-324645-69
  - 3 Replace missing ceiling tiles at the elevator on the ground floor level and replace stained ceiling tiles as needed.  
Workorder # 01-5064-324646-69
- 
- 1 Install backflow preventor on the domestic water feeds to the building.  
Control #

**Minor Maintenance Projects (Less Than \$5000) EXTERIOR**  
**AGRICULTURAL ADMINISTRATION BUILDING #003 MAY 31, 1998**

- 1 Replace single wood door at the loading dock.  
Work order # 01-5064-324649-72
- 2 Repair cracks in eastside dock driveway.  
Work order # 01-5063-030839-51
- 3 Patch the concrete dock at the southeast corner.  
Workorder # 01-5063-030840-51
- 4 Fasten a metal plate at the base of the light post on the south side of the building.  
Workorder # 01-5064-324650-73
- 5 Raise the concrete slab at the east entrance.  
Workorder # 01-5063-030842-51
- 6 Repair one window screen on the west side at the ground floor level.  
Workorder # 01-5064-324651-69
- 7 Remove debris from the west side area well and clean the storm drain.  
Workorder # 01-5064-324652-69

## BUILDING EVALUATION SUMMARY

### BUILDING INFORMATION

Fac # **003**, Facility Name: **AGRICULTURAL ADMINISTRATION BUILDING**,

Date: 5/31/98, Inspector: AJR

Year Constructed: 1956 and 1957 Gross Sq. Ft: 101,313

Net Sq. Ft: 74,898, Replacement Cost: \$ 14,976,000 \*

### II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	BUILDING COMPONENT CONDITION VALUE MULTIPLIER	BUILDING COMPONENT CURRENT VALUE
Foundation	4.56	683,552	87	595,504
Columns and Beams	13.13	1,966,765	87	1,713,427
Exterior Walls	9.46	1,416,817	74	1,051,676
Ext. Windows & Doors	2.68	400,810	58	232,484
Roofing & Flashing	2.07	310,705	92	284,841
Partitions & Doors	7.80	1,168,252	69	811,343
Wall Finishes	3.01	450,523	74	332,912
Floor Finishes	8.88	1,329,819	70	930,940
Ceilings & Finishes	8.15	1,221,072	60	732,680
Conveying	4.23	633,839	58	367,649
Plumbing	3.11	466,058	58	270,330
Heating	9.96	1,491,386	58	865,058
Cooling and Vent.	7.68	1,149,610	53	613,156
Elect. Serv. & Dist.	1.51	226,815	70	158,784
Lighting and Power	12.20	1,826,948	65	1,181,498
Safety Standards	1.56	233,029	60	139,824
<b>TOTALS</b>	<b>100.00</b>	<b>14,976,000</b>	<b>69</b>	<b>\$10,282,107</b>

### III. BUILDING RATING SUMMARY

Overall Building Rating = **69%**

\* Replacement Cost assigned September 1997 by The Office of University Resource Planning & Institutional Analysis without the furnishings and fixed equipment allocation.

\*\* Percent allocation of each building component is calculated from The Means Standard Construction Cost data for College Classroom Buildings.

# FOUNDATIONS

FAC #:003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING:** ( $\$ \underline{683,552}$ ) x ( $\underline{87\%}$ ) =  $\$ \underline{595,504}$

Possible Value	x (	Condition Value Multiplier	) = \$	Component Value
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**SYSTEM DESCRIPTION**

Sat    Att

- a. Footings:**
- [ X ]    [   ]    Interior Footings/Piers ..... *spread footers*
- [   ]    [   ]    Interior Footings/Bearing Walls .....
- [ X ]    [   ]    Perimeter Footings..... *spread footers*
- [   ]    [   ]    Grade Beams .....
- [   ]    [   ]    Piles .....
- [   ]    [   ]    Caissons.....
- b. Foundation Wall Materials:**
- [ X ]    [   ]    Concrete Cast-in-place .....
- [   ]    [   ]    Concrete Block .....
- [   ]    [   ]    Stone .....
- [   ]    [   ]    Brick .....
- [   ]    [   ]    Other.....
- c. Waterproofing and Underdrain:**
- [ X ]    [   ]    Coating .....
- [   ]    [   ]    Membrane.....
- [   ]    [   ]    Board .....
- [ X ]    [   ]    Drain Tile..... *4" at perimeter*
- d. Slab on Grade:**
- [   ]    [   ]    Plain.....
- [   ]    [   ]    Reinforced .....
- e. Ground/Basement Floor Slab:**
- [   ]    [   ]    Plain.....
- [ X ]    [   ]    Reinforced .....
- f. Special Substructures:**
- [   ]    [   ]    .....

**COMMENTS:**

*The foundations are in good condition.*

# COLUMNS AND BEAMS

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 1,966,765) x (87%) = \$ 1,713,427**

Possible	Condition	Component
Value	Value Multiplier	Value

**SYSTEM DESCRIPTION**

Sat     Att

**a. Columns and Beams:**

- Reinforced Concrete .....
- Precast Concrete.....
- Steel .....
- Fireproofing .....
- Wood.....
- Other .....

**b. Floor Joists:**

- Concrete .....
- Steel Trusses .....
- Wood .....
- Other .....

**d. Floor Decks:**

- Concrete Slab.....
- Precast Slab.....
- Metal Deck w/concrete fill.....
- Wood .....

**e. Roof Joists:**

- Concrete .....
- Steel .....*auditorium*
- Wood .....

**f. Pitched Roof System:**

- Pitch [ ]3/12, [ ]4.5/12, [ ]10/12.....
- Dormers .....
- Steel Purlins .....
- Wood Rafters .....
- Fireproofing .....
- Underlayment.....
- Insulation.....
- Ventilation .....
- Other .....

**g. Flat Roof System:**

- Slope .....*0.25"/foot*
- Concrete Deck.....
- Precast Slab.....
- Metal Deck w/concrete fill.....
- Metal Deck w/insulation.....
- Wood Deck .....

Insulation .....2" foam glass  
        Other.....

**COMMENTS:**

*There were no problems noted with the columns and beams.*

## EXTERIOR WALLS

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 1,416,817) x ( 74%) = \$ 1,051,676**

Possible Value	Condition Value Multiplier	Component Value
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**SYSTEM DESCRIPTION**

**Sat Att**

**a. Walls:**

- Concrete CIP PRECAST.....*the basement walls*
- Concrete Block/brick.....
- Brick MASONRY VENEER .....
- Veneer.....
- Window/Curtainwall .....
- Metal Siding .....
- Other.....*limestone*

**b. Wall Lintels Over Openings:**

- Concrete PRECAST CIP .....
- Limestone .....
- Brick Masonry .....
- Steel .....
- Wood .....
- Other.....

**c. Wall Trim:**

- Limestone .....
- Brick .....
- Marble.....
- Wood .....
- Other..... *decorative metal panels at west entrances*

**d. Finishes:**

- Plain.....
- Stucco .....
- Paint.....
- Parging.....
- Exposed Aggregate .....
- Drivit .....
- Other.....

**e. Exterior Wall Backing System:**

- Concrete.....
- Concrete Block .....
- Brick Masonry .....
- Ceramic Glazed Clay Tiles.....
- Metal Studs.....

[ ] [ ] Wood Studs .....

**COMMENTS:**

*The exterior walls are in good condition and have decorative limestone and metal panels.*

## EXTERIOR WINDOWS AND DOORS

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING:** (\$ 400,810) x (58%) = \$ 232,484

Possible Value	Condition Value Multiplier	Component Value
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### SYSTEM DESCRIPTION

Sat    Att

**a. Window materials:**

- Wood .....
- Steel .....
- Alum.....
- PVC .....
- Other .....

**b. Windows type & number:**

- Double Hung .....374
- Awning .....
- Casement .....
- Pivoted.....
- Sliding .....
- Fixed.....3
- Other .....

**c. Window glazing:**

- Single pane .....
- Double pane.....

**d. Window Wall and/or Store Front:**

- Store Front.....
- Vestibule.....*at main entrances*
- Single pane .....
- Double pane.....
- Other .....

**e. Door Materials:**

- Wood .....*at the dock*
- Steel..... *at mechanical room and auditorium exits*
- Alum..... *entrances on east and west sides*

**f. Doors type & number:**

- Vestibule Double ..... 5
- Double ..... 2
- Exit .....7
- Stair Exit.....4
- Garage.....*one at the dock*
- Special .....

**g. Hardware:**

- Automatic opener ..... *at the auditorium entrance*
- Push Bar Openers wt Closures .....
- Key Cards .....

**COMMENTS:**

*The single glazed, double hung windows are in fair condition. A wooden exterior door needs to be replaced. The rest of the doors are in good condition.*

# ROOFING

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 310,705) x (92%) = \$ 284,841**

Possible	Condition	Component
Value	Value Multiplier	Value

**SYSTEM DESCRIPTION**

**Sat Att**

**a. Roof Covering:**

- Built-up asphalt Coal Tar Modified .....
- Built-up w/gravel asphalt Coal Tar .....*36,306SF*
- Asphalt Roll.....
- Asphalt Shingle .....
- Copper .....
- EPDM.....
- Other.....

**b. Flashing:**

- Materials: Cu Galv Al EPDM SS PVC
- Base & Counter .....*1,740 LF*
- Cap.....*1,740 LF*
- Reglet.....
- Valley & Ridge.....

**c. Gravel Stop & Edge Strips:**

- Type SS Galv Al Cu PVC .....*355 LF*

**d. Drainage:**

- Gutters w/ Exterior Downspouts .....*18 LF*
- Scuppers w/o Exterior Downspouts .....
- Drains w/ Interior Storm Drains .....
- Emergency Overflow.....

**e. Parapets:**

- Concrete.....
- Brick .....*2010 LF*
- Precast .....
- Other.....

**f. Parapet Caps:**

- Metal SS Galv Al Cu PVC .....*1876 LF*
- Tile .....
- Limestone .....*134 LF*
- Precast .....
- Other .....

**h. Roof accessories:**

- [ ]     [ ]    Lightning Protection .....
- [X]    [ ]    Roof Curbs .....
- [X]    [ ]    Equipment Frames.....
- [ ]     [ ]    Pitch Pockets .....
- [ ]     [ ]    Other .....

**COMMENTS:**

*The roof was replaced in 1992 and is in good condition.*

## PARTITIONS AND DOORS

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 1,168,252) x ( 69%) = \$ 811,343**

Possible Value	Condition Value Multiplier	Component Value
-------------------	-------------------------------	--------------------

**SYSTEM DESCRIPTION**

**Sat Att**

**a. Partition Framing:**

- [ ] Concrete Block ..... *upper portion of walls*
- [ ] Clay Tile Block.....
- [ ] Glazed Clay Tile Block ... *lower portion of hallway walls*
- [ ] Masonry.....
- [ ] Wood Stud.....
- [ ] Metal Stud ..... *in renovated areas*
- [ ] Other.....

**b. Special partitions and Walls:**

- [ ] Demountable.....
- [ ] Toilet ..... *metal*
- [ ] Screen Walls.....
- [ ] Glass.....
- [ ] Gate.....
- [ ] Other.....

**c. Wall Material:**

- [ ] Plaster ..... *on concrete block walls*
- [ ] Drywall.....
- [ ] Glass.....
- [ ] Wood Paneling.....
- [ ] Composite Paneling.....
- [ ] Steel Panels.....
- [ ] Tile/Glazed ..... *in restrooms*
- [ ] Other.....

**d. Interior Doors & Frames:**

- [ ] Met Door/Met Frame..... *fire doors*
- [ ] Wood Door/Wood Frame.....
- [ ] Wood Door/Metal Frame.....
- [ ] Glazing ..... *opaque*
- [ ] Roll-up.....
- [ ] Sliding.....
- [ ] Other..... *glass door to V.P.'s offices*

**e. Hardware:**

- [ ] Door [X]Knobs [ ]Levers.....
- [ ] Door Closures.....

- Kick/Push Plates.....
- Security & Detection .....
- Automatic Openers.....
- Fire Door Magnets.....
- Other.....

**COMMENTS :**

*The partitions and doors are in good condition.*

## WALL FINISHES

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ <u>450,523</u>) x ( <u>74%</u>) = \$ <u>332,912</u></b> <div style="display: flex; justify-content: space-around; font-size: small;"> <span>Possible Value</span> <span>Condition Value Multiplier</span> <span>Component Value</span> </div>
---

### SYSTEM DESCRIPTION

**Sat     Att**

**a. Wall Finishes:**

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Paint .....  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Vinyl Wall Coverings .....   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Prefinished Paneling .....   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Cork .....   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Wallpaper.....   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Ceramic Glazed Tile ..... <i>in restrooms and corridor walls</i>   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Marble.....  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Stone .....  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Trim & Wainscot .....  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Decoration.....  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Glass.....   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Other ..... <i>carpet wall covering at the auditorium entrance</i> |

### COMMENTS:

*Wall finishes are in good condition except for the tiles in room 339T and in the southwest stairwell.*

## FLOOR FINISHES

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ <u>1,329,819</u>) ( <u>70%</u>) = \$ <u>930,940</u></b>						
<table style="margin: auto; border: none;"> <tr> <td style="padding: 0 10px;">Possible</td> <td style="padding: 0 10px;">Condition</td> <td style="padding: 0 10px;">Component</td> </tr> <tr> <td style="padding: 0 10px;">Value</td> <td style="padding: 0 10px;">Value Multiplier</td> <td style="padding: 0 10px;">Value</td> </tr> </table>	Possible	Condition	Component	Value	Value Multiplier	Value
Possible	Condition	Component				
Value	Value Multiplier	Value				

**SYSTEM DESCRIPTION**

**Sat    Att**

- a. Carpet:**
- [ X ]    [   ]    Rolled ..... *in some offices*
- [   ]    [   ]    Tile.....
- b. Concrete Topping:**
- [ X ]    [   ]    Clear Sealant..... *equipment room floors*
- [   ]    [   ]    Antislip .....
- [   ]    [   ]    Epoxy.....
- c. Resilient:**
- [ X ]    [   ]    Vinyl Composition Tile.....
- [   ]    [   ]    Vinyl/Plastic Tile.....
- [   ]    [   ]    Asphalt Asbestos Tile.....
- [   ]    [   ]    Linoleum Tile .....
- [   ]    [   ]    Vinyl Roll .....
- [   ]    [   ]    Rubber .....
- [ X ]    [   ]    **d. Ceramic Tile** [X]Mosaic [   ]Quarry [   ]Pavers .....
- [ X ]    [   ]    **f. Masonry** [   ]Marble [   ]Granite [   ]Slate [X]Brick.....
- [ X ]    [   ]    **g. Terrazzo** [   ]Marble [X]Granite .....
- [   ]    [   ]    **h. Wood** [   ]Tiles [   ]T&G Hardwood [   ]Planking .....
- [   ]    [   ]    **i. Pedestal** [   ]Vinyl Tiles [   ]Grills [   ]Supply Air [   ]Vent....
- j. Base Molding:**
- [ X ]    [   ]    Vinyl.....
- [   ]    [   ]    Wood .....
- [   ]    [   ]    Terrazzo.....
- [ X ]    [   ]    Ceramic Tile ..... *restrooms*
- [   ]    [   ]    Masonry.....

**COMMENTS:**

*The tile, carpeting and brick floors are in good condition. .*

## CEILINGS AND FINISHES

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 1,221,072) x ( 60%) = \$ 732,680**

Possible Value	Condition Value Multiplier	Component Value
-------------------	-------------------------------	--------------------

### SYSTEM DESCRIPTION

Sat    Att

**a. System Type:**

- [ ]    Exposed ..... *in equipment room*
- [ ]    Applied to Structure .....
- [ ]    Suspended Stud .....
- [ ]    Suspended Steel Grid ..... *concealed spline*
- [ ]    Suspended Aluminum Grid .....
- [ ]    Suspended Sealed Grid.....
- [ ]    Suspended Concealed Spline.....

**b. Materials:**

- [ ]    Drywall .....
- [ ]    Plaster ..... *in stairways and restrooms*
- [ X]    Mineral Fiber Board ..... *throughout most of the building*
- [ ]    Fiberglas Board .....
- [ ]    Cementitious Fiber Board .....
- [ ]    Metal Pan Tile .....
- [ ]    Other.....

**c. Finishes:**

- [ ]    Paint.....
- [ ]    Prefinished [X]Paint [ ]vinyl [ ]Fabric
- [ ]    Other .....

**d. Openings & Inserts:**

- [ ]    Air Distribution .....
- [ ]    Lighting Fixtures .....
- [ ]    Access Panels .....
- [ ]    Sprinklers.....
- [ ]    Smoke Detectors.....
- [ ]    Speakers.....
- [ ]    Skylights .....
- [ ]    Other .....

### C. COMMENTS:

*Most areas have 12" X 12" ceiling tiles with the exception of some renovated offices and the lobby area of the auditorium. There are a few missing tiles at the elevator in the first floor corridor, some damaged tiles at the south end of the first floor corridor and some stained tiles throughout the building.*

CONVEYING

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ <u>633,839</u>) x ( <u>58%</u>) = \$ <u>367,649</u></b>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Elevators:

- Number.....*one Otis*
- Type.....*Passenger*
- Speed..... *75 FPM*
- Capacity (lbs.)..... *2,500 Lbs.*
- Dimensions..... *56"x69"*
- Door Operation:.....
- Center .....
- To Side .....

b. Elevators:

- Number.....
- Type.....
- Speed.....
- Capacity (lbs.).....
- Dimensions.....
- Door Operation:.....
- Center .....
- To Side .....

c. Lifts and Hoists:

- Number.....
- Type.....

d. Moving Stairs and Walks:

- Number.....
- Type.....

e. Conveyors:

- Number.....
- Type.....

COMMENTS:

*The elevator is 43 years old and will be upgraded the summer of 1998.*

## MECHANICAL/PLUMBING

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ <u>466,058</u>) x (<u>58%</u>) = \$ <u>270,330</u></b> <div style="display: flex; justify-content: space-around; font-size: small;"> <span>Possible Value</span> <span>Condition Value Multiplier</span> <span>Component Value</span> </div>
--

**SYSTEM DESCRIPTION**

**Sat Att**

**a. Services Available:**

- [ ] Cold Water .....4" DWS
- [ ]  Backflow Valve .....
- [ ] Hot Water .....*from steam converter*
- [ ] Natural Gas.....4"
- [ ] Compressed Air.....1/2"
- [ ] [ ] Other.....

**b. Piping & Fittings:**

- [ ] Cast Iron .....
- [ ] [ ] Vitrified Clay .....
- [ ] Copper Pipe .....
- [ ] Copper Tubing.....
- [ ] Steel .....
- [ ] Galv. Steel .....
- [ ] [ ] Other.....

**c. Water Heaters:**

- [ ] [ ] Gas.....
- [ ] Steam Converter/Tank.....
- [ ] [ ] Steam Instantaneous .....
- [ ] [ ] Central Hot Water.....

**d. Drainage:**

- [ ] Storm Drains..... 6 @ 5" and 1 @ 10"
- [ ] Sanitary Drainage..... 5 @ 6"
- [ ] Floor Drains .....
- [ ] [ ] Sump Pumps .....

**e. Fixtures: Number**

- [ ] Water Closets ..... 21
- [ ] Urinals ..... 17
- [ ] Lavatory Sinks ..... 22
- [ ] Kitchen Sinks ..... 4
- [ ] Service Sinks ..... 9
- [ ] [ ] Showers .....
- [ ] Electric Water Coolers ..... 8

- f. Sprinkler Systems:**
- Wet .....
- Dry.....
- Carbon Dioxide .....
- Halon .....
- g. Standpipe Systems:**
- []Wet []Dry .....
- Fire Hose Valves []2.5" []1.25" .....
- Hose Cabinets, Hoses []Installed []Removed .....

**COMMENTS:**

*A back flow valve needs to be installed in the domestic water line. The plumbing system is 42 years old but appears to be functioning adequately.*

## MECHANICAL/HEATING

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 1,491,386) x ( 58%) = \$ 965,058**

Possible Value	Condition Value Multiplier	Component Value
-------------------	-------------------------------	--------------------

### SYSTEM DESCRIPTION

**Sat Att**

**a. Heat Source:**

- [ ] Central Plant Steam .....4”
- [ ] Central Plant Hot Water .....

**b. System Type:**

- [ ] Steam .....
- [X] Hot Water .....
- [ ] Warm Air.....

**c. Air Handling Units:**

- [ ] Multizone [ ]Preheat [X]Heating [ ]Reheat.....
- [ ] Dual Duct [ ]Preheat [ ]Heating [ ]Reheat.....
- [ ] Make-up Air [ ]Preheat [ ]Heating [ ]Reheat.....
- [ ] Variable Volume Air [ ]Preheat [ ]Heating [ ]Reheat .....
- [ ] Constant Volume Air [ ]Preheat [X]Heating [ ]Reheat...
- [ ] Other.....

**d. Air Filters:**

- [ ] Prefilter[X]Multi [ ]DDAHU [ ]MUAHU [ ]VAVAHU [X]CAV
- [ ] Bagfilter[ ]Multi [ ]DDAHU [ ]MUAHU [ ]VAVAHU [ ]CAV
- [ ] Other.....

**e. Space Equipment:**

- [ ] Radiators.....
- [ ] Convectors.....*at perimeter*
- [ ] Unit Heaters.....*at entrances and in stairwells*
- [ ] Reheat Coils .....
- [ ] DD Boxes .....
- [ ] CAV Boxes.....
- [ ] 2-Pipe Fan Coil.....
- [ ] Other.....

**f. Control Type:**

- [ ] [X]Pneu [X]Electric [ ]DDC [X]DDC Upgrade.....

**COMMENTS:**

*There were some complaints noted regarding the heating system and a project has been recommended to replace the hot water system.*

## COOLING/VENTILATING

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ <u>1,149,610</u>) x ( <u>53%</u>) = \$ <u>613,156</u></b>						
<table style="margin: auto; border: none;"> <tr> <td style="padding: 0 10px;">Possible</td> <td style="padding: 0 10px;">Condition</td> <td style="padding: 0 10px;">Component</td> </tr> <tr> <td style="padding: 0 10px;">Value</td> <td style="padding: 0 10px;">Value Multiplier</td> <td style="padding: 0 10px;">Value</td> </tr> </table>	Possible	Condition	Component	Value	Value Multiplier	Value
Possible	Condition	Component				
Value	Value Multiplier	Value				

**SYSTEM DESCRIPTION**

Sat Att

- a. System/Capacity:**
  - [ ] Water .....
  - [ ] DX .....
- b. Chillers Capacity/Year/Refrigerant/Manufacturer:**
  - [ ] Centrifugal .....
  - [X] Reciprocating.....*95 ton/R11/Trane/1968*
  - [ ] Absorption .....
  - [ ] Screw .....
- c. Condenser Side:**
  - [X] Type/Capacity [X]CW [X]DX .....
- d. Air Handling Units:**
  - [ ] Multizone [X]CW [ ]DX [ ]HUMD .....
  - [ ] Dual Duct [ ]CW [ ]DX [ ]HUMD .....
  - [ ] Make-up Air [ ]CW [ ]DX [ ]HUMD.....
  - [ ] Variable Volume [ ]CW [ ]DX [ ]HUMD.....
  - [ ] Constant Volume [X]CW [ ]DX [ ]HUMD .....
  - [ ] Other.....
- e. Additional Air Filters:**
  - [ ] Postfilter [ ]Multi [ ]DDAHU [ ]MUAHU [ ]VAVAHU [ ]CAV
  - [ ] Other [ ]HEPA [ ]BAG [ ]CARTRIDGE [ ]CHARCOAL
- f. Direct Expansion: Number**
  - [X] Window units.....*80 units for 2<sup>nd</sup> and 3<sup>rd</sup> floors*
  - [ ] Thru-the-wall.....
  - [ ] Single zone .....
  - [ ] Other .....
- g. Distribution Boxes:**
  - [ ] VAV [ ]FC [ ]REHEAT .....
  - [ ] CAV [ ]FC [ ]REHEAT.....
  - [ ] DUAL DUCT [ ]FC [ ]REHEAT .....
- h. Special Systems:**
  - [ ] Type.....
  - [ ] Capacity.....
- i. Control Systems:**
  - [ ] [X]Pneu [X]Electric [ ]DDC [X]DDC Upgrade.....

**j. Fans:**

- [ ] Exhaust equipment ..... *11Exhaust Fans*
- [ ] Recirculating.....

**COMMENTS:**

*The cooling towers on the upper roof were replaced in the last few years. The rest of the cooling system should be replaced with more efficient central system.*

# ELECTRICAL SERVICE AND DISTRIBUTION

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING: (\$ 226,815) x (70%) = \$ 158,784**

Possible Value	Condition Value Multiplier	Component Value
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## SYSTEM DESCRIPTION

### a. Service:

Substation:  Buckeye,  McCracken Power Plant  AEP

Primary Voltage:  13,200 Volts,  Volts

Switch Gear Circuit No.: 201/306

Transformer:

Manufacture	Type	KVA	Secondary/Voltages	Location
ABB	DRY	750	208/120	ROOM 9002M

### b. Distribution System:

#### 1. Motor Control Center (MCC) Room 50M

Panelboard  Fused,  Circuit Breakers

Voltage  480/3,  277/3,  208/3,  240/1

Amperage  1200A,  800A,  600A,  400A,  200A

#### 2. Lighting Room 50M

Panelboard  Fused,  Circuit Breakers

Voltage  480/3,  277/3,  208/3,  240/1

Amperage  800A,  400A,  250A,  200A,  150A,  100A

#### 3. Building Power Room 50M

Panelboard  Fused,  Circuit Breakers

Voltage  480/3,  277/3,  208/3,  240/1

Amperage  800A,  400A,  250A,  200A,  150A,  100A

### c. Conduit and wire:

Conduit  Steel,  Aluminum,  PVC,  Flexible

Conductor  Copper,  Aluminum,  MIT

Wire:  PVC Cover,  Romex,  Armored Cable(BX)

### d. Emergency System:

Battery backup Room

Emergency Panel Room

UPS Room

### e. Emergency Generator: none

## COMMENTS:

*There were no electrical problems identified by the occupants. The transformer is was replaced during the PCB project and is just adequate for the building load. If additional equipment is introduced into the building, the transformer will need to be upgraded.*

## ELECTRICAL LIGHTING AND POWER

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

<b>COMPONENT RATING: (\$ 1,826,948) x ( 65%) = \$ 1,181,498</b> <div style="display: flex; justify-content: space-around; font-size: small;"> <span>Possible Value</span> <span>Condition Value Multiplier</span> <span>Component Value</span> </div>
--

**SYSTEM DESCRIPTION**

**Sat Att**

**a. Lighting (lamp type):**

- Fluor 40 watt.....
- Fluor 32 watt..... *in most of the building*
- Fluor Can.....
- Incandescent ..... *at east entrance and in auditorium*
- HID  Mercury  HPS  Metal Halide.....
- Low Voltage (12V).....
- Other.....

**b. Lighting Levels**

- Halls.....
- Rooms.....
- Mechanical Rooms.....

**c. Fixture Condition**

- Fixtures.....
- Bulbs.....
- Fixture Lens.....

**d. Receptacles & Switches:**

- Wall Outlet 20A.....
- GFIC Breakers.....
- Switches.....
- Cover Plates.....

**c. Special:**

- Lightning Protection.....
- Communication  Clock  Public Address  Bells ....
- Alarm  Fire  Security..... *at library entrances*
- Telecommunication  Phones  Data  Cable TV ....
- Data Systems.....
- Fiber Optics.....

**COMMENTS:**

*The building has 32 watt fixtures throughout with incandescent lighting at the east entrance and in the auditorium.*

## SAFETY STANDARDS

FAC #: 003

DATE: 5/31/98

INSPECTOR: AJR

**COMPONENT RATING:** (\$ 233,029) x ( 60%) = \$ 139,824

Possible Value	Condition Value Multiplier	Component Value
-------------------	-------------------------------	--------------------

### SYSTEM DESCRIPTION

Sat    Att

**a. Exits:**

Stair Construction:

- |     |     |   |
|-----|-----|---|
| [ ] | [ ] | concrete .....                                      |
| [X] | [ ] | steel ..... <i>rubber treads with concrete fill</i> |
| [ ] | [ ] | wood.....   |
| [X] | [ ] | Number of Exit Stairs ..... <i>four</i>             |
| [X] | [ ] | Number of Other Exits ..... <i>five</i>             |

**b. Fire Rating:**

- |     |     |  |
|-----|-----|--|
| [X] | [ ] | Construction Type: I_ II_ III <u>X</u> IV_ V_ VI___..... |
|     |     | Building Height: <i>42 ft, 4 stories</i> .....           |

**c. Extinguishing Systems:**

- |     |     |                                      |
|-----|-----|--------------------------------------|
| [X] | [ ] | Portable.....                        |
| [X] | [ ] | Standpipe ..... <i>in stairwells</i> |
| [X] | [ ] | Hose Cabinets.....                   |
| [X] | [ ] | Hoses ..... <i>removed</i>           |
| [ ] | [ ] | Sprinklers.....                      |
| [ ] | [ ] | Gas Suppression .....                |
| [ ] | [ ] | Other .....                          |

**d. Detection & Alarm Systems:**

- |     |     |  |
|-----|-----|--|
| [X] | [ ] | Pull Stations.....                         |
| [X] | [ ] | Bells.....                                 |
| [ ] | [ ] | Horns .....                                |
| [ ] | [ ] | Strobes .....                              |
| [X] | [ ] | Annunciator Panel ..... <i>in room 50M</i> |
| [X] | [ ] | Smoke Detectors.....                       |
| [ ] | [ ] | Halls .....                                |
| [ ] | [ ] | Elevators.....                             |
| [ ] | [ ] | Rooms .....                                |
| [ ] | [ ] | Equip Rooms.....                           |
| [X] | [ ] | Ducts .....                                |

**e. Lighting Systems:**

- |     |     |   |
|-----|-----|---|
| [X] | [ ] | Exit Signs [ ]BATTERY [X]EMC .....        |
| [ ] | [X] | Exit Lighting [ ]BATTERY [ ]EMC .....     |
| [ ] | [X] | Emergency Lighting [ ]BATTERY [ ]EMC..... |
| [ ] | [ ] | Emergency Generator .....                 |

[ ] [ ] **f. Lightning Protection**

**COMMENTS:**

*Exit signs have been installed in halls, stairs and at exits. There are no emergency exit or hallway lights and a project has been proposed to install these lights.*



*of the building needs to be patched The security lights at the small east entrance needs a lens cover.*

The Ohio State University  
Department of Physical Facilities  
**BUILDING AUDIT METHODOLOGY**

**1. BUILDING AUDIT PROGRAM OBJECTIVE**

To provide a building-by-building inventory, including maintenance deficiencies that currently exist, for the 172 OSU buildings that the Department of Physical Facilities is budgetary responsible. These audits will be used to establish repair and renovation projects, budget cost estimates for these projects, and overall levels of required maintenance funding.

**2. BUILDING AUDIT APPROACH**

A five step procedure is used to meet the program objectives:

1. Collect Historical and Inventory Data on each building.
2. Interview Building Occupants.
3. Perform a Building Inspection.
4. Complete Building Evaluation Forms.
5. Issue Written Report.

**3. DATA ORGANIZATION**

The data collected is stored by hard copy with field notes in a building file established for each building. The report data is being stored in a database program that allows retrieval of specific data as it is needed. The "Building Evaluation" forms contain ratings for the condition of each building component and a description of any deficiencies for those components. The "Building Information" sheets provide data on the utilities to the buildings and the type of systems in each building.

**4. COST ESTIMATES**

Costs are for budgeting purposes only and are based on The Means Standard Construction Cost data, auditor experience, industry sources and OSU project cost data. Costs are reported current to the year of the audit. The building component values assigned in the "Building Evaluation" forms are not cost estimates. These values are calculated from the replacement cost provided by The Office of Campus Planning and space Utilization for each OSU building. This building replacement cost is allocated to each building component to provide an estimated value for each component. Project cost estimates will exceed the building component values in most situations because of tear-out, handling and site limitations that occur in building component replacement projects.

**5. DATA USAGE**

Repair and Renovation Projects: provided to assist in the budgeting process for the Department of Physical Facilities. Building Evaluation: provided to give a numerical rating for each building on campus quantifying its percentage of deficiency.

## 6. LIMITATIONS

- (1) All inspections are visual and do not include physical tests, instrumentation or metering measurements, sampling, or monitoring.
- (2) Only random typical offices or laboratories are entered. Typical spaces are deemed to be representative of average conditions throughout each building.
- (3) The scope of the analysis does not include complete OSHA, energy, or physical impaired access study. Buildings and components are inspected for condition and general safety requirements rather than specialized code conformance.
- (4) It is assumed that the State of Ohio Division of Factory and Building Inspection at the time of construction approved the buildings inspected. The recommendations listed in the reports are not an attempt to bring these existing buildings up to present day code standards. Rather, the intent is to eliminate obvious problems and to upgrade the buildings in a reasonable manner in regard to occupant safety.
- (5) Cost estimates are in current year dollars and include contractor mark-ups, construction administration costs, and architectural/engineering costs where applicable. Escalation factors must be applied for future work. Combining of projects should serve to decrease costs. These estimates are strictly for purposes of budgeting, and final pricing will be required when the specific scope of work for the project is defined.
- (6) The building inspections are defined to include the following:
  - (a) Includes general repainting and redecorating, wholesale replacement of building and system components on-going maintenance, replacement and renovation projects are not included.
  - (b) Includes exterior building walls and attached items.
  - (c) Includes the first step up at all entries. Ramps outside the buildings are included; the steps and walks up to the ramps are not included.
  - (d) Blinds, drapes, light bulbs, and movable furniture are not included.
  - (e) Fixed equipment inside the buildings that is installed and maintained by a specific academic department or using agency is not included.
  - (f) Utility lines supplying the buildings are not included.
  - (g) The program needs of the using department are assumed to be satisfied. No consideration has been given to anticipate any changes in current occupant space needs.

## ABBREVIATIONS

A/C .....	AIR CONDITIONING
AHU .....	AIR HANDLING UNIT
ATT .....	ATTENTION
BLDG .....	BUILDING
BUR.....	BUILT UP ROOF
COND.....	CONDENSATE WATER
CAV .....	CONSTANT AIR VOLUME
DDAHU .....	DUAL DUCT AIR HANDLING UNIT
DDHV .....	DUAL DUCT HIGH VELOCITY
DHWH .....	DOMESTIC HOT WATER HEATER
DHWR.....	DOMESTIC HOT WATER RETURN
DHWS .....	DOMESTIC HOT WATER SUPPLY
DHWT.....	DOMESTIC HOT WATER TANK
DX .....	DIRECT EXPANSION AIR CONDITIONER
EWC .....	ELECTRIC WATER COOLER
FPM.....	FEET PER MINUTE
GPM .....	GALLONS PER MINUTE
HID .....	HIGH INTENSITY DISCHARGE LIGHT
HPS .....	HIGH PRESSURE STEAM (125 PSI)
HVAC.....	HEATING, VENTILATING AND AIR CONDITIONING
KV .....	KILOVOLTS
KVA .....	KILOVOLTS AMPS
KW .....	KILOWATTS
LC .....	LIQUID COOLED
LF .....	LINEAL FEET
LPS .....	LOW PRESSURE STEAM (15 PSI)
MBH.....	THOUSAND BTU PER HOUR
MCC .....	MOTOR CONTROL PANEL
MPS.....	MEDIUM PRESSURE STEAM (50 PSI)
MZCV .....	MULTIZONE CONSTANT VOLUME AIR HANDLING
N/A .....	NOT APPLICABLE
PSI.....	POUNDS PER SQUARE INCH
RM.....	ROOM
RTU.....	ROOF TOP UNIT (HEATING OR A/C)
SAT .....	SATISFACTORY
SF .....	SQUARE FEET
S/P .....	STAND PIPE
SR.....	STEAM RETURN LINE
SS .....	STEAM SUPPLY LINE
SY.....	SQUARE YARDS
TR.....	TERMINAL REHEAT
V .....	VOLTS
VAV .....	VARIABLE AIR VOLUME

**APPENDIX**  
Reduced Scale Building Floor Plans  
C-1 Building Space Assignments